

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Glacier Production, Inc.
Well Name/Number: Berkram A No.A- 4
Location: SE NW Section 35 T37N R5W
County: Glacier MT; Field (or Wildcat) Cut Bank

Air Quality

(possible concerns)
Long drilling time no, 5 to 6 days drilling time.
Unusually deep drilling (high horsepower rig) no, 3000' TD
Possible H₂S gas production slight
n/near Class I air quality area no
Air quality permit for flaring/venting (if productive) n/a

Mitigation:

- ☐ Air quality permit (AQB review)
- ☐ Gas plants/pipelines available for sour gas
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: no special concerns – using small rig to drill to 3000'

Water Quality

(possible concerns)
Salt/oil based mud no, freshwater, freshwater mud system
High water table no
Surface drainage leads to live water No, nearest ephemeral drainage is Fitzpatrick Coulee 1/4 mile to the West of this location.
Water well contamination none, all water wells nearby are less than 150' in depth.
Porous/permeable soils no, bentonite soils
Class I stream drainage no

Mitigation:

- ☐ Lined reserve pit
- ☒ Adequate surface casing
- ☐ Berms/dykes, re-routed drainage
- ☐ Closed mud system
- ☐ Off-site disposal of solids/liquids (in approved facility)
- ☐ Other: _____

Comments: 300' of surface casing will be set and cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)
Stream crossings no, stream crossings
High erosion potential no, small cut, up to one foot and small fill, up to 6.4', required.
Loss of soil productivity no, location will be restored after drilling
Unusually large wellsite no, 120'X180' location size required.

Damage to improvements no

Conflict with existing land use/values Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: no special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences None nearby.

Possibility of H₂S slight

Size of rig/length of drilling time Small drilling rig/short 5 to 6 days drilling time

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H₂S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: no concerns

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) n/a None identified.

Proximity to recreation sites None identified

Creation of new access to wildlife habitat none identified

Conflict with game range/refuge management none identified

Threatened or endangered Species none identified

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: no concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

☐ avoidance (topographic tolerance, location exception)

___ other agency review (SHPO, DSL, federal agencies)

Other: _____

Comments: Private surface

Social/Economic

(possible concerns)

___ Substantial effect on tax base

___ Create demand for new governmental services

___ Population increase or relocation

Comments: no concerns

Remarks or Special Concerns for this site

Well is a 3000' Madison Formation test

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts expected in the drilling of this well. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Thomas Richmond _____

(title:) Administrator

Date: September 27, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Pondera County water wells

(subject discussed)

September 27, 2013

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____